

In addition, please see also the Information Disclosure Statement filed July 25, 2001.

Counsel now addresses the issues raised in the outstanding Official Action. Applicants' claims are directed to milk beverage compositions such as milk coffee or milk tea (claim 9) which include a specific polyglycerol fatty acid ester which ester is characterized as having a cloud point of not less than 90°C when measured under certain conditions of concentration and sodium chloride. The objective of the invention is to provide a milk beverage which is capable of withstanding UHT (ultra high temperature) sterilization. The claimed compositions are capable of maintaining their emulsion stability for long periods of time (specification, pages 2-3).

Applicants' claims require that the beverages contain a polyglycerol fatty acid ester having a cloud point of not less than 90°C. The term "cloud point" is well understood in this art as explained in applicants' specification in the discussion bridging pages 4 and 5, while the procedures for measuring cloud point are given on pages 5 and 6 of applicants' specification.

The term "cloud point" is explained in more detail as follows:

Polyglycerol fatty acid ester used in the compositions of this invention is a mixture obtained by reacting the polyglycerin with fatty acid. Therefore, the cloud point according to the present invention is a property of the fatty acid ester mixture.

The cloud point according to the present invention is determined as follows: First, the polyglycerol fatty acid ester is dispersed in a 20 wt% sodium chloride aqueous solution such that the ester is present in an amount of 1% by weight, and then heated while stirring to form a uniform aqueous solution. The thus obtained uniform aqueous solution of polyglycerol fatty acid ester is shaken and stirred, and then allowed to stand. This procedure is repeated at intervals of 2 to 5°C while increasing the temperature of the aqueous solution within an optional temperature range between 0°C. and 100°C. Then, the temperature at which the polyglycerol fatty acid ester is separated in the form of oil or gel and the aqueous solution becomes heterogeneous, is measured. The temperature at

which the aqueous solution reaches such a heterogeneous state, is called "cloud point" (see page 6 of the specification).

The cloud point shows a property of polyglycerin itself and does not relate to the drinking condition of the described and claimed milk beverage.

The term "cloud point" is to be distinguished from "cloudy" or other expressions used to express lack of transparency in fluid suspensions and dispersions. The beverages of the present invention contain milk fats and milk proteins as milk components and may include whole milk powder solutions, milk coffee, milk tea or the like (page 3, third paragraph).

Turning now to the specific rejections, in item 3, claims 1-3 and 5-7 are rejected as either being anticipated by or "obvious" over the disclosures of U.S. 6,156,807 to Kaitou et al, assigned to the owners of the present application. This reference is concerned with a powdered emulsifier composition used to improve the handling properties of wax-like emulsifiers (column 1, lines 8-9) and may be used for preparing various products (column 1, lines 11-12). While the examiner's comment is correct that this document refers to "coffee beverages" it does not describe milk-based beverages such as milk coffee.

In support of the rejection argued in item 3 of the Official Action the examiner directs attention to the following discussion found at column 3, beginning at line 37 of the reference:

"the powdered emulsifier composition is mixed with a mixture such as wheat flour, sugar, and after further adding water and milk thereto, the obtained mixture is kneaded and then baked to produce confectioneries such as langues de chats or pudding; or the powdered emulsifier composition is also blended with beverages components such as coffee extract, sweetening agent, perfume, and with water to produce coffee beverages."

Clearly there is no indication that the coffee beverage is blended with milk or that milk forms any substantial component of the compositions prepared using the powdered emulsifier composition described in this reference. Thus while a "coffee beverage" is

described in this document, a milk-based coffee beverage is not -- nor is it suggested in the disclosures of this document.

The objective of Kaitou is to improve the handling property and workability of wax-like emulsifiers such as polyglycerin fatty acid esters. To obtain this, in the reference, the wax-like emulsifiers or particulate emulsifiers are mixed and pulverized into a powder. This powder facilitates handling of the product, can be metered and blended and increases the dissolution velocity upon blending.

The objects of the present invention are quite different from those of Kaitou-- applicants are concerned with preparing a milk-based beverage which may be successfully UHT sterilized and still maintain emulsion stability for long periods of time. One skilled in the art seeking to solve this problem would find no guidance, suggestion or information in the Kaitou et al reference that would assist them in reaching a successful conclusion.

U.S. 4,093,750 to Babayan was applied as a prior art reference in item 4 of the Official Action. While this document is concerned with beverages, these beverages are citrus-flavored and have stabilized citrus oil in them. Polyglycerol esters are used "as a cloud for beverages", according to the abstract of this document. The word "cloud" as used in this citation (see column 1, lines 29 and 40) or "clouding agent" (column 2, lines 23 and 26) must not be confused with the very specific terminology "cloud point" as used in applicants' claims and explained in some detail on pages 4-6 of applicants' specification. As used in this citation, "cloud" simply refers to a cloudy or turbid-appearing beverage, the objective being to render non-transparent the beverage by suspending and mixing flavors and oils in it. As used in this document "cloud" is quite different from applicants' precise term "cloud point" as explained in their specification and featured in their claims.

In addition, while applicants note that Babayan's Example 3 mentions "sodium chloride" this really has nothing to do with the measurement of cloud point or the like but is simply a component in the overall beverage composition, and indeed a very minor one (0.015%). By contrast, the "sodium chloride aqueous solution" mentioned in applicants'

specification and claims refers to the procedure in which the "cloud point" of the polyglycerol fatty acid ester component of applicants' milk beverage is measured-- concentration is also a feature of this measurement but is not related to the contents of the beverage itself (compare concentrations for measuring cloud point at 1% versus concentrations of the polyglycerol fatty acid) that may be present in the milk beverage compositions, for instance in claim 4. Thus the mere mention of sodium chloride in the cited reference means no more than "a pinch of salt" in a recipe and in any event is unrelated to applicants' claims. In no way is this document suggestive of the claims now under review.


In item 1 on page 3 of the Official Action (presumably the item number is 5) in addition to the Babayan patent just discussed also cited is Talkington et al U.S. 4,960,602. This describes certain food and beverage compositions having an altered flavor display. The document does describe beverages containing a sucrose fatty acid ester so applicants do not contest the content of the document but rather the manner in which it is applied to the claims of the present application and in particular the fact it is combined with the equally nonrelevant Babayan et al reference. The record of this application does not establish why the two documents can or should be combined by one skilled in the art.

Not mentioned in the Official Action are the comparative data and studies presented in applicants' specification demonstrating the importance of milk-based beverage compositions having the requisite minimum cloud point. Attention is again directed to these comparisons demonstrating the unobviousness of applicants' compositions.

Reconsideration and favorable action are requested.

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